



SFC PAUL RAY SMITH SIMULATION & TRAINING TECHNOLOGY CENTER - STTC

Advance Planning Briefing to Industry
9 June 2004



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RDECOM

1 June 9, 2004

Technology to the Warfighter Quicker



Agenda

- Simulation and Training Technology Center (STTC) Overview
- Science & Technology Objectives (STOs)
- Broad Agency Announcement (BAA)
- Small Business Innovative Research (SBIR)





How we fit into the Army Materiel Command's

"If the soldier shoots it, drives it, flies it, wears it or eats it, AMCOM is involved."

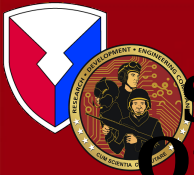


Research, Development & Engineering Command (RDECOM)

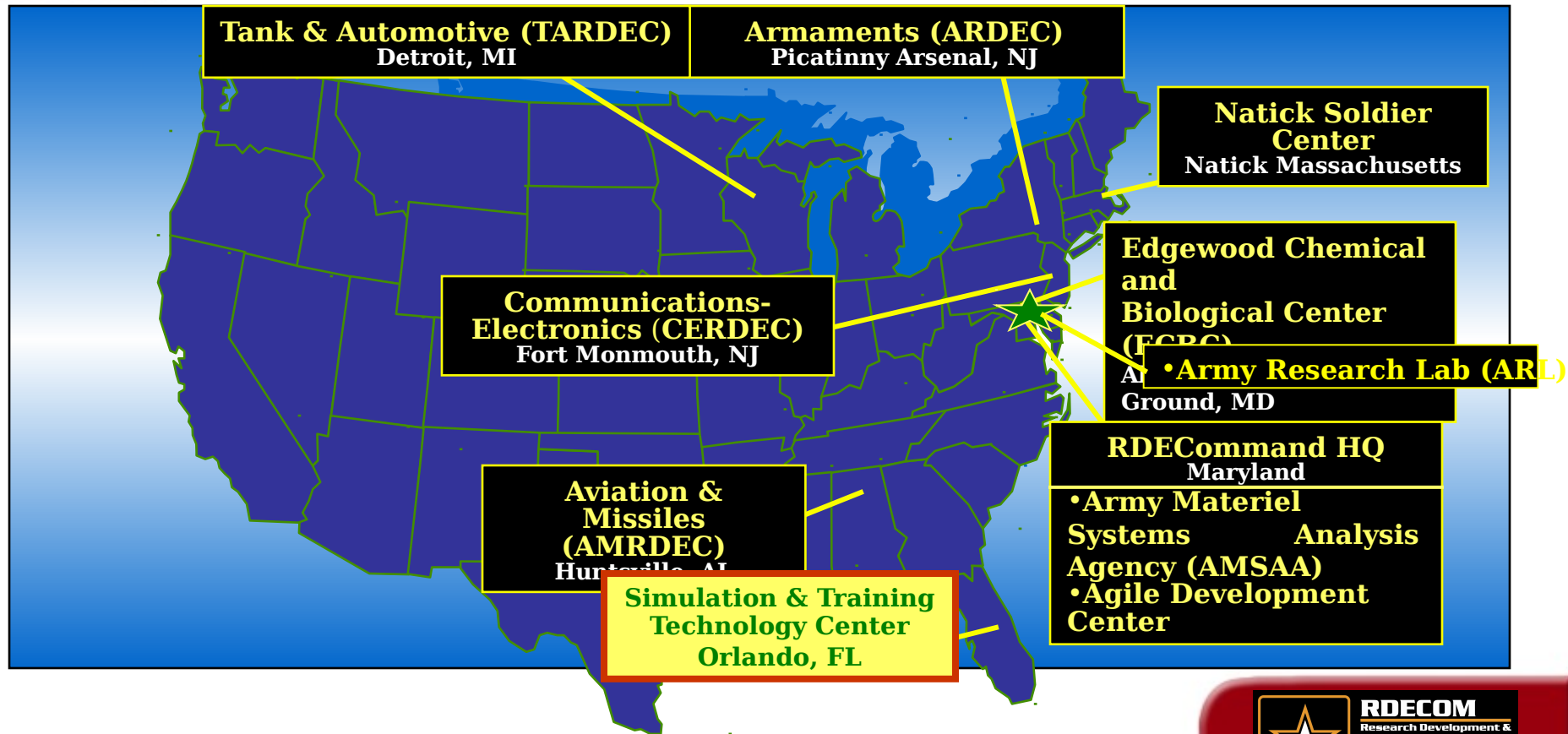
To be recognized as the preeminent world leader in research, development and engineering of systems of systems whose hallmark is TRANSITIONING the right technology in the shortest time to our soldiers.



RDECOM



Simulation & Training Technology Center is One of Ten Organizations in the RDE Command



Research Development & Engineering Command



U.S. ARMY

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Research Development & Engineering Command

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Simulation & Training Technology

Simulation Enabled Learning

HISTORICAL

- **Vision:** *Unleashing the power of soldiers through superior training simulation, test and training instrumentation and mission rehearsal simulation solutions*
- **Mission:** *To enhance soldier readiness, the STTC:*
 - *researches and develops training, simulation, test & training instrumentation and mission rehearsal simulation solutions*
 - *transitions solutions to acquisition programs, our soldiers, the defense community and our allies.*

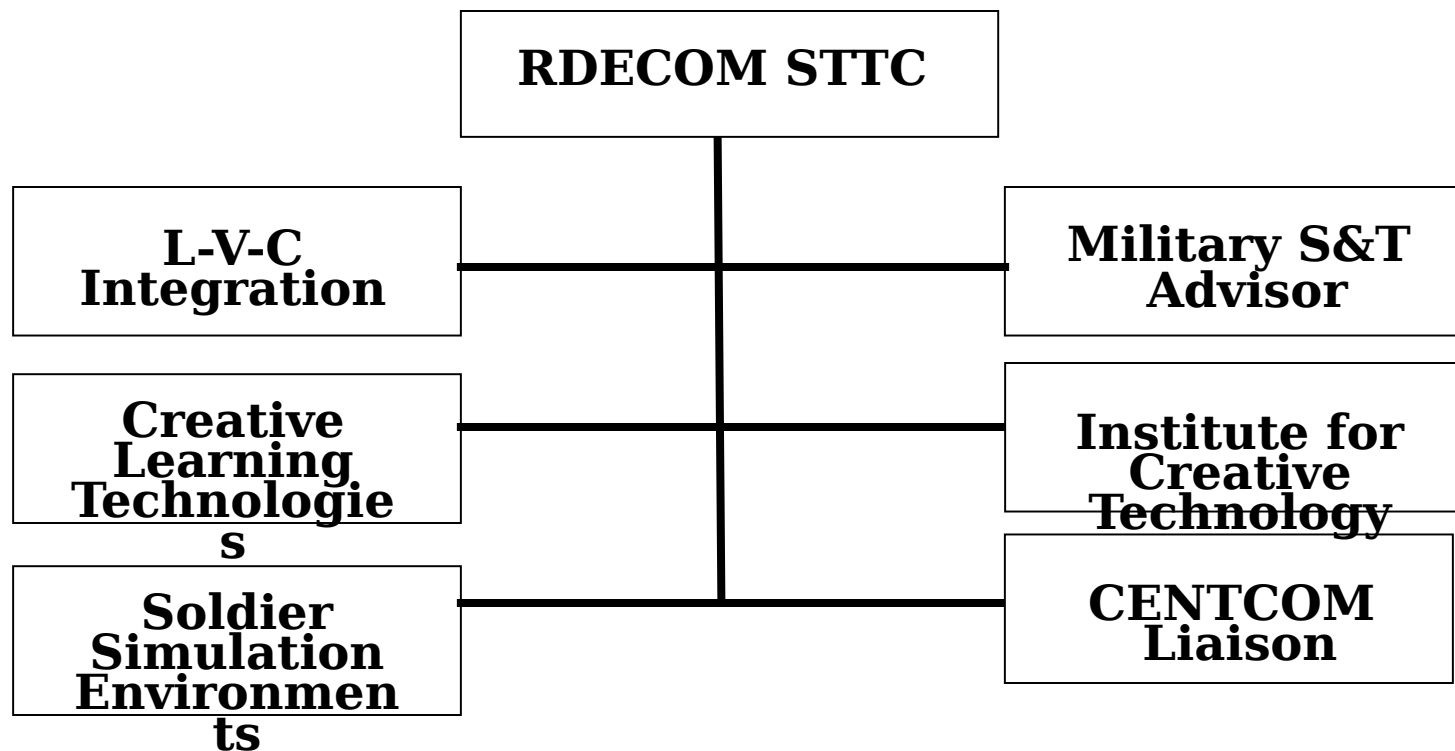
Simulation Enabled Learning

For Current and Future Forces





Functional Organizational View





SFC Paul Ray Smith Simulation & Training

STTC Partnership Approach to Mission



**Army Research
Institute
(ARI)**



**Program
Executive
Office
Simulation
Training
&
Instrumentation
(PEO STRI)**



**Marines PM
Training Systems**



**NAVAIR
Systems**



**Air Force Agency
for M&S**



**Army Research
Laboratory
Human Research &
Engineering
Directorate
(HRED)**



**University Of
Central Florida
(UCF) &
Institute for
Simulation &
Training (IST)**



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Research Development &
Engineering Command

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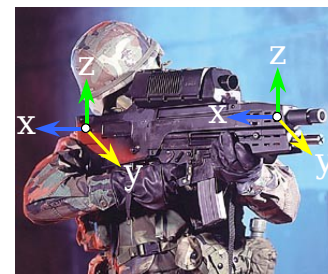
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Soldier Centric Investments



Rapid Construction of Urban Terrain Databases for Training



Adv Pos/Nav & Tracking for the Future Force



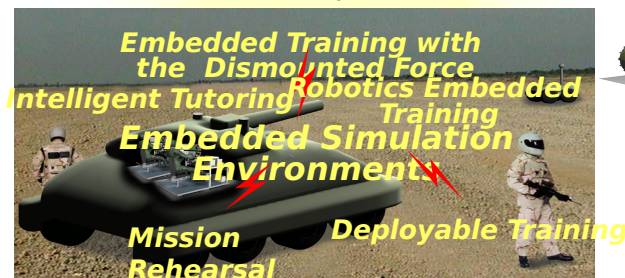
Embedded Training for Dismounted Soldiers



Massively Multi-Player Simulation For Asymmetrical Warfare



Advance Medic Training Technologies



Embedded Combined Arms Team Training & Mission Rehearsal



Autonomous Systems Simulations



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Current Science & Technology Objectives

- Completed—
In
FY04
- IV.SN.2002.04 Adv Robotics Simulation
(Composable Behavior Technologies)
 - IV.SP.2002.04 Embedded Training for Dismounted
Soldiers
 - IV.SP.2003.02 Rapid Construction of Urban Terrain
Databases for Training
 - IV.SP.2003.03 Massively Multi-Player Simulations for
Asymmetric Warfare
 - IV.SP.2003.04 Embedded Combined Arms Team
Training and Mission Rehearsal
 - IV.C4.2003.02 Adv POS.NAV & Tracking for
Objective Force
 - IV.ME.2004.04 Advanced Medic Training
Technologies (AMTT)





New Science & Technology Objectives

- **Computer Generated Forces Scalability**

RDEC: STTC Status: Proposed New
Start Year: FY05 End Year FY08

- **Enhanced Learning Environment with Creative Technologies**

RDEC: STTC Status: Proposed New
Start Year: FY05 End Year FY08





Broad Agency Announcement (BAA)

Objective

Identify and fund innovative projects proposed by industry in response to R&D topics generated by the RDECOM-STTC, PEO STRI and ARI. All of these efforts address Army Science and Technology Master Plan (ASTMP) objectives and provide a means to leverage the efforts of high technology companies.





BAA N61339-01-R-0023

- Issue Date: 01 March 2001
- Expiration Date: 01 March 2006
- Currently going through yearly topic update to be published in mid - July 04
- Changes announced in FedBizOpps
 - <http://fedbizopps.gov/>
- Located on PEO STRI web page
 - <http://www.peostri.army.mil/BAA>





BAA Standard Operating Procedure

- Telephone call to the technical point of contact listed at the end of topic
- Informal 2 - 4 page white paper with ROM included
- Proposal requested by Contracting Officer upon favorable evaluation of white paper
- Contract award for selected proposals*

White Papers can be submitted any time - Optimal time for submission is July

* Funding of research will be determined by funding constraints and research priorities set during each budget cycle.





Army SBIR Program

- **One Annual Solicitation** (04.3 Solicitation: 1 Jul - 12 Aug 04)
- **Aligns topics with TRADOC interests www.tradoc.army.mil**
 - (Force Operating Capabilities - Pamphlet 525-66)
 - <http://www.tradoc.army.mil/tpubs/pams/p525-66.htm>
- **Addresses the Phase I/Phase II funding gap issue**
- **One Phase II Process (Invited and Fast Track)**
- **Complies with OSD requirements to accelerate contract awards (Phase I - 4 Months, Phase II - 6 Months)**
- **Includes performance incentives - Phase II Quality Awards**





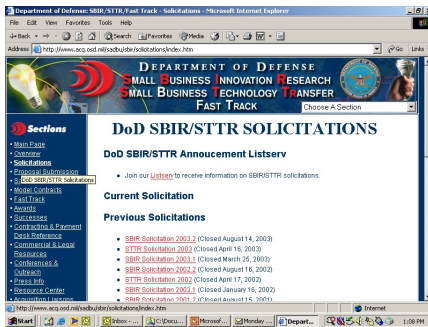
Army SBIR Process

Topics

Phase I

Phase II

Phase III



**DoD Solicitation
SBIR YY.3
May thru mid-Aug**

**Phase I
Phase II
+ Phase II
Plus
= \$1.1M**

Feasibility Study

**\$70K, 6
Months**

**\$50K Option
(Gap
Funding)**

**Average 10%
of proposals
submitted are
selected**

**Prototype
Development
\$730K, 2 Years
Phase II Plus -
\$250K
matching
funds,
1 Year
Average 50%
invited
proposals
are selected**

**Commercializat
ion
transition to
Army
or Private
Program
No SBIR
Funds...**

U.S. ARMY Simulation & Training
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Key Dates for 04.3 Solicitation

259 SBIR Topics Listed

Pre-Solicitation Opens
(Internet)

3 May 04

Solicitation Opens

<http://www.dod.mil/sad/msl/solicitations/sbir043/index.htm>

1 Jul 04

Phase I Proposals Due (25
Pages)

12 Aug 04

due 6:00am EST

Award Notification

mid - Nov

04

Contract Award

mid - Dec

04





Current Phase I STTC SBIR Topics

- A04-222 Low Cost Wide Field of View Head Mounted Display for Aviation Training
- A04-223 Distributed and Collaborative Information Environment for Embedded After Action Review Technologies
- A04-224 Visual Aid for Multi Resolution Federation Planning and Development
- A04-225 Innovative Concepts for Low-Cost Multi-Spectral Targets for Gunnery Training
- A04-226 Intelligent Agents for Real-Time Story Adaptation for Training Assessment
- A04-227 Innovative Wireless Network Modeling And Simulation Technology In Support of Training, Testing And Range Instrumentation Requirements





Current Phase I STTC SBIR Effort

- A03-200 Advanced Virtual Environment Haptic Simulation (2)
- A03-202 High-Precision, Expendable, Six Degree-of-Freedom Sensor (2)
- A03-203 Training Performance Assessments for Mixed Initiative (Manned/Unmanned) Team (1)
- A03-204 Adapting Intelligent Tutoring System for Assessing Collaborative Skills (2)
- A03-205 Software Tools for Modeling Urban Details (2)
- A03-206 Common Aggregation Framework for Simulation Scalability (1)
- A03-207 Multi-Resolution Terrain Models Representation (2)

- **Total Funded Amount - \$ 840K**

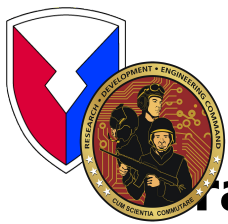




Current Phase II STTC SBIR Effo

- A01-209 Spectral Efficient Range Communications
- A01-210 Distributed Repositories of Highly Expressive, Reusable, and Reasonable Ontologies for Web-based SNE Fusion
- A01-212 The PGREDS Simulation Toolkit for Population Modeling
- A01-213 Virtual Environments for Medical Simulation
- A01-215 Geometric Pairing
- A01-216 C2I Surrogate Behaviors using Subsumption
- A02-211 Unified Position/Location Tracking and Communications Device for Live Urban Warfare Training
- A02-215 Dynamic Composable Simulations for Robotic Behaviors
- A02-217 Display for Embedded, Deployable Training Systems
- **Total Funded Amount - Over \$ 7M**

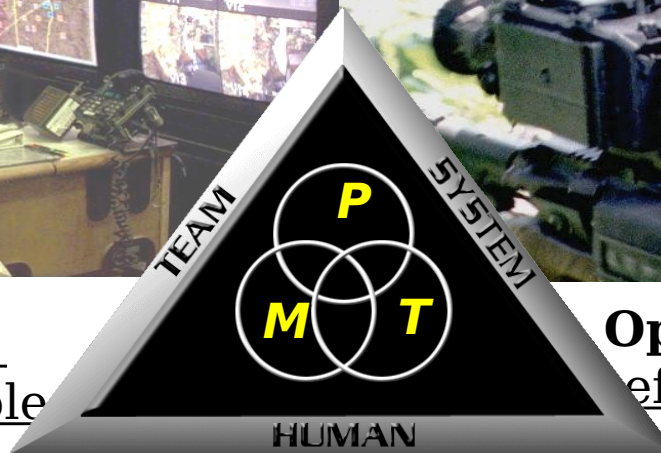




STTC Integration

People - Methodology - Tools

Transition Technology to Enable On-time Capability



Integrate: blend into a functioning or unified whole

Optimize: to make as perfect, effective, or functional with acceptable levels of RISK

